

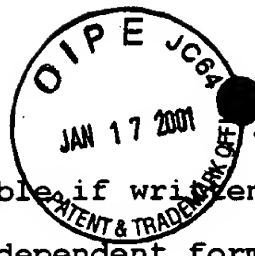
1 14. (Twice Amended) The selectable waveguide arrangement of claim  
2 9, wherein the third signal comprises a fourth signal and a fifth  
3 signal, the selectable waveguide arrangement is coupled to a fourth  
4 probe and a fifth probe, the selectable waveguide arrangement  
5 further comprises,

6 a coupler coupled to the first front end port and comprising a  
7 fourth port and fifth port respectively coupled to the fourth and  
8 fifth probes, the fourth and fifth signals are orthogonally  
9 polarized [respecting] with respect to each other and the fourth  
10 and fifth probes are polarization sensitive to respectively  
11 communicate the fourth and fifth signals between the antenna feed  
12 port and the fourth and fifth probes through the first front end  
13 waveguide section and fourth and fifth ports.

14  
15 REMARKS

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17 The specification was objected to due to specified  
18 informalities. Applicant requests reconsideration. The  
19 specification has been accordingly amended.

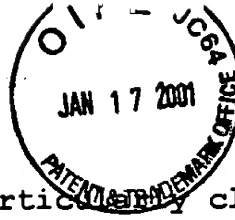
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21 The claims were rejected under 35 USC 112 as failing to  
22 particularly claim the inventions due to first and second shapes  
23 being straight or bent. Applicant requests reconsideration. The  
24 claims have been amended to clearly claim that one shape is  
25 straight and the other is bent at ninety degrees.



1 Claim 8 was deemed allowable if written in independent form.  
2 Claim 8 has been written in independent form incorporating the  
3 limitation of base claim 5.

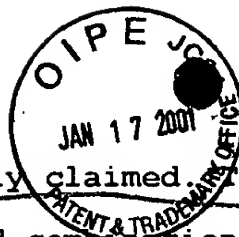
4 Claims 5-7 were rejected as been obvious in view of Phillips,  
5 USSR, Hosman or Blass in further view of Hettlage. Applicant  
6 requests reconsideration.

7  
8 In the present office action concedes that claims inventions  
9 are not anticipated by the prior art. The claimed invention relies  
10 upon the combination of straight and the other ninety degree bent  
11 shapes, and square and circular cross sections so that orthogonally  
12 probes can be used to detect orthogonal signals that are not cross  
13 coupled during communication through the waveguide. The rejection  
14 of claim 5 claiming different shaped propagation waveguides, as  
15 obvious lacks comprehension of the purpose of the invention and the  
16 purpose of the explicitly claimed shaped conduits. The invention  
17 relies on the use of circular and square cross sections and the use  
18 of straight and ninety degree bent shapes that enables the  
19 propagation of orthogonally polarized signals without signal cross  
20 coupling, SO THAT, the use of orthogonal polarized sensitive probes  
21 can then be use to isolate the polarized signals of interest that  
22 are concurrently communicated through the waveguide. Such a  
23 problem, and of course, such a solution, is not addressed in the  
24 cited references, the hence the arrangement in claim 5 can not  
25 possibly be deemed obvious in view of the cited references. The  
26 obviousness rejection based upon different shapes, admittedly not  
27 anticipated by cited reference, is a simplistic rejection based on  
28 mere identification of prior art elements, without understanding



1 and analysis as to why the particularly claimed inventions are  
2 nonobvious. When the reasons for particularly claimed  
3 circular/square and straight/90° bent conduits are firstly  
4 understood as propagation conduits that do not cross-couple  
5 orthogonally polarized signals, then solving a completely unknown  
6 problem, and hence completely unobvious, then the claimed  
7 combination could be understood as such, and allowance being  
8 immanently proper. The claims particularly claim that one waveguide  
9 shape is straight and the other is ninety degree bent for selective  
10 coupling, and that either one or both can have a circular or square  
11 cross-section for signal isolation without cross coupling. This  
12 arrangement and the isolation reason this combination is not taught  
13 in the prior art.

14  
15 The cited reference do not solve the problem of providing dual  
16 port routing of concurrently communicated orthogonally polarized  
17 signals. In particular, Hosman discloses a curved waveguide 19,  
18 Lanctot 117' discloses a rectangular waveguide shown clear in  
19 Figure 1, Hettlage discloses a curved waveguide 9, Phillips  
20 discloses curved waveguides 35, 30 and 32, Vogeley shows a  
21 disjointed waveguide 22 and 14 cause distortion of or coupling  
22 between orthogonally polarized signals. Blass discloses a  
23 rectangular cross section of waveguide 6. Tyrrell discloses curved  
24 waveguides 12 and 13. Lanctot 079' discloses rectangular waveguides  
25 12 and 13. Miller discloses a rectangular waveguides Y, X1 and X2.  
26 USSR discloses only a single waveguide section. These waveguides  
27 are completely unsuitable for the solving the problem solved by the



1 present inventions as particularly claimed. The cited references do  
2 not teach nor suggest the claimed combination.

3  
4 The cited references do not teach nor suggest a switch having  
5 straight and 90° bent waveguides having square or circular cross  
6 sections for routing signals to a pair ports enabling concurrent  
7 communications of orthogonally polarized signals remaining isolated  
8 from each other during concurrent communication through either one  
9 of the waveguides. In this unique configuration, isolated  
10 orthogonally polarized signals can be concurrently communicated and  
11 routed to the selected port without distorting each other. Surely,  
12 the cited references do not teach the problem solved by the present  
13 inventions. Allowance of the claims is respectfully requested.

14  
15  
16 Respectfully Submitted

17 *Derrick Michael Reid*

18 Derrick Michael Reid  
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